

Application No.: 10/801,230
Reply to Office Action of: August 29, 2005

SPECIFICATION

Please replace paragraph [0004] with the following amended paragraph:

Gastric stimulation devices work well to suppress symptoms associated with gastroparesis. However, gastric stimulation devices typically require surgical implantation of both the electrodes, leads and typically the pulse generator. Although surgical implantation may be appropriate for long-term electrical stimulation, some patients may experience symptoms for a relatively brief period of time, i.e., a few weeks or less. For example, some patients may experience symptoms similar to gastroparesis for a short time. ~~For example, patients may experience nausea and, such as nausea and vomiting~~ for a short time following surgery. In these cases, however, it may not be desirable to subject the patient to the risk of surgery. Instead, non-surgical techniques for deployment of the stimulation electrodes and pulse generator are desirable.

Please replace paragraph [0049] with the following amended paragraph:

In some embodiments, the fixation structure, including pins, expandable frames, and the other structures described above, may be made ~~from~~ from a degradable material that degrades or absorbs over time at the attachment site to release stimulation device 20 from tissue at the target location. In either case, upon detachment, stimulation device 20 passes through the gastrointestinal tract of patient 12. U.S. Patent Nos. 6,285,897 and 6,698,056 to Kilcoyne et al. provide examples of fixation structures for attaching monitoring devices to the lining of the esophagus, including suitable degradable materials. The fixation structures described in the Kilcoyne patents may be suitable for attachment of stimulation device 20. The contents of the Kilcoyne et al. patents are incorporated herein by reference in their entirety.

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Please replace paragraph [0058] with the following amended paragraph:

Pulse generator 34 produces an electrical stimulation waveform with parameters selected to suppress particular symptoms such as nausea and vomiting. As shown in FIG. 2, pulse generator 34 includes a charging circuit 35, an energy storage device 37, and a stimulation interface 39. Charging circuit 35 converts energy supplied by power source 30 ~~device 37~~ to charge energy storage device 37, which may be a capacitor. Stimulation interface 39 amplifies and conditions charge from energy storage device 37 to produce an electrical stimulation waveform for application to electrodes 36A, 36B. As an example, pulse generator 34 may incorporate circuitry similar to the pulse generation circuitry in the ITREL 3 neurostimulator, commercially available from Medtronic, Inc. of Minneapolis, Minnesota.

Please replace paragraph [0086] with the following amended paragraph:

FIG. 19 is a cross-sectional side view of stimulation device 105 of FIG. 17, illustrating delivery via an endoscopic delivery device 120. As shown in FIG. 19, device housing 106 is disposed at a distal end ~~121~~ of delivery device 120. Raised feature 108 engages a recess 123 within a working member 125 of delivery device 120. Recess 123 is coupled to a vacuum port 122. A physician applies vacuum pressure to raised feature 108 via recess 123 and vacuum line 122 to hold device housing 106 in place during delivery to the target location within the gastrointestinal tract.

Please replace paragraph [0087] with the following amended paragraph:

When distal end ~~121~~ of delivery device 120 reaches a target location, the physician rotates working member 125 to rotate stimulation device 105 and thereby screw extension 118 into the target site. The physician then deactivates the vacuum pressure, and advances a translation member 124 to push stimulation

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device 105 out of delivery device 120 to ensure separation, and withdraws delivery device 120. Device housing 106 may include one or more longitudinal markings 127 to permit a physician to see, with endoscopic visualization, to what extent stimulation device 105 has been rotated during screw-in insertion into tissue. Alternatively, the markings 127 may be radio-opaque to permit external visualization using radiography or fluoroscopy.